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a. Serial No.	f. Foreign Priority	k. Print Claim(s)	p. PTO-1449
b. Applicant(s)	g. Disclaimer	l. Print Fig.	q. PTOL-85b
c. Continuing Data	h. Microfiche Appendix	m. Searched Column	r. Abstract
d. PCT	i. Title	n. PTO-270/328	s. Sheets/Figs
e. Domestic Priority	j. Claims Allowed	o. PTO-892	t. Other

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		Number	Kind Code³ (If known)			
		6,377,438	B1	Deane et al.	04-23-2002	
		6,374,008	B2	Solgaard et al.	04-16-2002	
		6,360,036	B1	Couillard	03-19-2002	
		6,329,738	B1	Hung et al.	12-11-2001	
		6,307,663	B1	Kowars	10-23-2001	
		6,289,145	B1	Solgaard et al.	09-11-2001	
		6,275,325	B1	Sinclair	08-14-2001	
		6,275,320	B1	Dhuler et al.	08-14-2001	
		6,255,757	B1	Dhuler et al.	07-03-2001	
		6,211,598	B1	Dhuler et al.	04-03-2001	
		6,137,206	B1	Hill	10-24-2000	
		6,067,797	B1	Silverbrook	05-30-2000	
		5,905,571	B1	Butler et al.	05-18-1999	
		5,561,558	B1	Shiono et al.	10-01-1996	
		5,069,419	B1	Jerman	12-03-1991	
		3,216,315	B1	Keller	11-09-1965	
		3,045,532	B1	Staunton	07-24-1962	
		5,757,536		Ricco et al	5/26/98	
		6,428,173		Dhuler et al	8/6/02	
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		First Named Inventor	Chen et al
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		V. RAMACHANDRAN et al., An assessment of the blazed grating electro-optic deflector, J. Phys. D: Appl. Phys. Vol. 8, 1975 pp. 1923-1926	
		K. E. PETERSEN, Micromechanical light modulator array fabricated on silicon, Appl. Phys. Letters, Vol. 31, No. 8, Oct. 15, 1977, pp. 521-523	
		M. H. BRODSKY et al., Color Projection Deformographic Display using Silicon Micromechanics and Optical Diffraction, IBM Technical Disclosure Bulletin, June 1, 1980, pp. 394-395	
		W. B. PENNEBAKER, Projection Display with Electrochemically Created Grating Structures, IBM Technical Disclosure Bulletin, June 1, 1980, pp. 397-400	
		M. MAYSTRE et al., Optimization of a wavelength demultiplexer in fiber optics using gold echelette gratings, Proc. SPIE - Application, Theory, and Fabrication of Periodic Structures	
		R. E. BROOKS, Micromechanical light modulators on silicon, Optical Engineering, Vol. 24, No. 1, Jan./Feb. 1985, pp. 101-106	
		J. A. STEIN et al., A Display Based on Switchable Zero Order Diffraction Grating Light Valves, Advances in Display Technology V, SPIE Vol. 526, Jan. 1985, pp. 105-112	
		P. PHILIPPE et al., Wavelength demultiplexer: using echelette gratings on silicon substrate, Applied Optics, Vol. 24 No. 7, April 1, 1985, pp. 1006-1011	
		S. R. MALLINSON et al., Miniature micromachined Fabry-Perot interferometers in silicon, Electronics Letters, Vol. 23 No. 20, Sept. 24, 1987, pp. 1041-1043	
		J-P. LAUDE et al., Wavelength division multiplexing/demultiplexing (WDM) using diffraction gratings, Proc. SPIE - Application, Theory, and Fabrication of Periodic Structures SPIE Vol. 503, Aug. 21-23, 1984, pp. 22-28	
		P. HESKETH et al., Anomalous Emissivity from Periodic Micromachined Silicon Surfaces, Technical Digest, IEEE Solid-State Sensors Workshop, June 1986 (reprinted in "Micromechanics and MEMS - Classic and Seminal Papers to 1990") June 1986	

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		First Named Inventor	Chen et al
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		W. EHRFELD et al., Fabrication of Microstructures Using the LIGA Process, Proceedings IEEE Micro Robots and Teleoperators Workshop Nov. 1987 (reprinted in "Micromechanics and MEMS -	
		O. SOLGAARD et al., Deformable Grating Optical Modulator, Optics Letters, Vol. 17, No. 9, May 1, 1992, pp. 688-690	
		D. B. SENE et al., Development and characterization of micromechanical gratings for optical modulation, Proc. IEEE MEMS-96, June-96, pp. 222-227	
		D. M. BURNS et al., Micro-electro-mechanical variable blaze gratings, Proc. IEEE MEMS-97 Workshop, Nagoya Japan, Jan. 24, 1997, pp. 55-60	
		R. K. MALI et al., Development of micromechanical deformable mirrors for phase modulation of light, Optical Engineering, Vol. 36 No. 2, Feb. 1997, pp. 542-548	
		M. L. SCOTT et al., Gray Scale Deformable Grating Spatial Light Modulator for High Speed Optical Processing, Smart Structures and Materials 1997, Smart Electronics and MEMS	
		D. M. BURNS et al., Optical beam steering using surface micromachined gratings and optical phased arrays, Optical Scanning Systems: Design and Applications SPIE Vol. 3131, July	
		D. ARMITAGE, Diffractive Projection Displays, Projection Displays II, SPIE Vol. 3013, May 1, 1997, pp. 112-125	
		D. M. BLOOM, The Grating Light Valve: revolutionizing display technology, Projection Displays II, SPIE Vol. 3013, May 1, 1997, pp. 165-171	
		M-H KIANG et al., Surface-micromachined Diffraction Gratings for Scanning Spectroscopic Applications, TRANSDUCERS '97, 9th Int. Conf. on Sensors and Actuators, IEEE and Transducers Research Foundation, 16-19 June 1997, Chicago, IL., June 16-19 1997	
		R. ALLAN, Reflective Color Flat-Panel Display Developed From A Deformable MEMS Optical Modulator, Electronic Design, June 23, 1997	


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		D. M. BURNS et al., Development of microelectromechanical variable blaze gratings, Sensors and Actuators A:Physical, Vol 64 No 1 1998 pp 7-15	
		D. T. AMM et al., Optical Performance of the Grating Light Valve Technology, SPIE Conference on Projection Displays V, SPIE Vol. 3634, Jan 1999, pp 71-78	
		D. C. MCCARTHY, Photonic Switches: Fast, but Functional?, Photonics Spectra, March 1, 2001, pp. 140-150	
		ANON, All the Good Bits: Displaying and Printing Digital Pictures, http://www.kodakkorea.co.kr/US/en/corp/researchDevelopment/technologyFeatures/gems.shtml , Feb. 2002	

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